

IN THE CLAIMS:

Please cancel Claims 7, 8, 11-13, 15 and 16 without prejudice to or disclaimer of the recited subject matter.

Please amend Claims 1, 3, 5, 6, 9, 10 and 14 as follows.

1. (Currently Amended) An information processing method of receiving image data compression-coded for each ~~tile~~spatial rectangle region and encrypting the image data, comprising:

repeatedly forming one spatial rectangle region ~~tile~~-group from a plurality of adjacent spatial rectangle regions ~~tiles~~-in an image space and another spatial rectangle region ~~tile~~-group from adjacent spatial rectangle region ~~tile~~-groups so as to define a hierarchical structure of the spatial rectangle region ~~tile~~-groups;

assigning identification information uniquely identifying each node to each node in the hierarchal structure;

generating encryption key information of an uppermost layer for an entire image expressed by encoded data;

executing, up to a ~~tile~~node located at a terminal, processing for generating encryption key information for a ~~tile group of a tile located at a lower layer~~node of interest on the basis of encryption key information generated for a ~~tile group~~node located at an upper layer in the hierarchical structure, the identification information assigned to the node of interest, and a one-way function, so as to generate encryption keys for each spatial rectangle region~~tile~~;

designating a desired spatial rectangle region ~~tile~~-group in a desired layer as an object to be encrypted in a tree structure of the spatial rectangle region ~~tile~~-groups; and

executing encryption processing for each spatial rectangle region~~tile~~, each of which is located at a lower layer belonging to the designated spatial rectangle region tile-group, by using an encryption key generated for ~~the tile~~each spatial rectangle region.

2. (Canceled)

3. (Currently Amended) The method according to claim 2, wherein the function generates the key information by using coordinate position information of a spatial rectangle region tile-group or a spatial rectangle region tile-located at the lower layer.

4. (Original) The method according to claim 1, wherein the encryption key information of the uppermost layer is output to a predetermined authentication server on the Internet.

5. (Currently Amended) The method according to claim 1, wherein the method further comprises a step of displaying the received encoded data as a hierarchical structure of spatial rectangle regions tiles-and spatial rectangle region tile-groups, and the desired spatial rectangle region tile-group of the desired layer is designated from the hierarchical structure displayed in the display step.

6. (Currently Amended) An information processing apparatus for receiving image data compression-coded for each spatial rectangle region tile-and encrypting the image data, comprising:

means for repeatedly forming one spatial rectangle region tile-group ~~form from~~ a plurality of adjacent spatial rectangle regions tiles-in an image space and another spatial rectangle region tile-group from adjacent spatial rectangle region tile-groups so as to define a hierarchical structure of the spatial rectangle region tile-groups;

means for assigning identification information uniquely identifying each node to each node in the hierarchal structure;

means for generating encryption key information of an uppermost layer for an entire image expressed by encoded data;

means for executing, up to a tile-node located at a terminal, processing for generating encryption key information for a tile-group ~~or a tile located at a lower layer~~ node of interest on the basis of encryption key information generated for a tile-group node located at an upper layer in the hierarchical structure, the identification information assigned to the node of interest, and a one-way function, so as to generate encryption keys for each spatial rectangle region tile;

means for designating a desired spatial rectangle region tile-group in a desired layer as an object to be encrypted in a tree structure of the spatial rectangle region tile-groups; and

means for executing encryption processing for each spatial rectangle region tile, each of which is located at a lower layer belonging to the designated spatial rectangle region tile-group, by using an encryption key generated for the spatial rectangle region tile.

7-8. (Canceled)

9. (Currently Amended) An information processing method of receiving information containing encoded image data compression-coded for each spatial rectangle region which constitutes an image, said encoded image data containing ~~of~~ both of encrypted and unencrypted spatial rectangle regions, tiles and reproducing an image, comprising:

repeatedly forming one spatial rectangle region tile-group from a plurality of adjacent spatial rectangle regions tiles in an image space and another spatial rectangle region tile-group from adjacent spatial rectangle region tile-groups on the basis of the received information so as to define a hierarchical structure of the spatial rectangle region tile-groups;

assigning identification information uniquely identifying each node to each node in the hierarchal structure;

receiving key information to be used to decrypt a desired spatial rectangle region tile group of an upper layer containing an encrypted spatial rectangle region tile;

executing, up to a tile-node located at a terminal from a node corresponding to the received key information, processing for generating key information for a lower layer of the tile group indicated by the key information-node of interest on the basis of the received or generated key information for a node located at an upper layer in the hierarchal structure, the identification information assigned to the node of interest, and a one-way function so as to generate the key information for each spatial rectangle region tile; and

decrypting the encoded data of each encrypted spatial rectangle region tile by using the key information generated for each spatial rectangle region tile.

10. (Currently Amended) An information processing apparatus for receiving information containing encoded image data compression-coded for each spatial rectangle region which constitutes an image, said encoded image data containing of both of encrypted and unencrypted spatial rectangle regions files and reproducing an image comprising:

means for repeatedly forming one spatial rectangle region tile group from a plurality of adjacent spatial rectangle regions files in an image space and another spatial rectangle region tile group from adjacent spatial rectangle region tile groups on the basis of the received information so as to define a hierarchical structure of the spatial rectangle region tile groups;

means for assigning identification information uniquely identifying each node to each node in the hierarchal structure;

means for receiving key information to be used to decrypt a desired spatial rectangle region tile group of an upper layer containing an encrypted spatial rectangle region tile;

means for executing, up to a ~~tile node~~ located at a terminal from a node corresponding to the received key information, processing for generating key information for a lower layer of the tile group indicated by the key information node of interest on the basis of the received or generated key information for a node located at an upper layer in the hierarchal structure, the identification information assigned to the node of interest, and a one-way function so as to generate key information for each spatial rectangle region tile; and

means for decrypting the encoded data of each encrypted spatial rectangle region tile by using the key information generated for each spatial rectangle region tile.

11-13. (Canceled)

14. (Currently Amended) A server which is connected to a network for providing a decryption key for an image containing encoded data of both encrypted and unencrypted spatial rectangle region tiles, comprising:

means for storing basic decryption key information and identification information, ~~where the basic decryption key information corresponds to~~ located at an uppermost layer of the image which has a hierarchical structure constructed by repeatedly forming one spatial rectangle region tile group from a plurality of adjacent spatial rectangle region tiles in an image space and another spatial rectangle region tile group from adjacent spatial rectangle region tile groups, and where the identification information uniquely identifies each node in the hierarchical structure; and

deriving, means for, when information that designates a spatial rectangle region tile group in a layer to be decrypted is received from a client on the network, sequentially deriving decryption key information for a node of interest from the basic decryption key ~~to a lower layer~~ or derived decryption key for a node at an upper layer in the hierarchical structure, the identification information of the node of interest, and a one-way function until reaching the designated spatial rectangle region tile group of the designated layer, ~~by using a one-way function~~ and, when decryption key information for the designated spatial rectangle region tile group is generated, notifying the client of the decryption key information.

15-16. (Canceled)